

Set	Items	Description
? e au=krieg, arthur		

Ref	Items	Index-term
E1	1	AU=KRI EG ANJA
E2	1	AU=KRI EG ARI BERT
E3	7	*AU=KRI EG ARTHUR
E4	1	AU=KRI EG ARTHUR F
E5	11	AU=KRI EG ARTHUR F.
E6	73	AU=KRI EG ARTHUR M
E7	253	AU=KRI EG ARTHUR M
E8	2	AU=KRI EG B
E9	273	AU=KRI EG B.
E10	4	AU=KRI EG B. L.
E11	9	AU=KRI EG B. L.
E12	1	AU=KRI EG B. L. (PACI FI C GAS AND ELECTRI C OO, SAN

Enter P or PAGE for more

? s e3-e7

7	AU=KRI EG ARTHUR
1	AU=KRI EG ARTHUR F
11	AU=KRI EG ARTHUR F.
73	AU=KRI EG ARTHUR M
253	AU=KRI EG ARTHUR M
S1	345 E3-E7

? s s1 and backbone

S1	345
S2	281168 BACKBONE
	4 S1 AND BACKBONE

? s s2/3, k/1-4

>>>Invalid syntax

? t s2/3, k/1-4

>>>KW C option is not available in file(s): 399

2/3, K/1 (Item 1 from file: 399)

DI ALCO R) File 399: CA SEARCH(R)

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139132442 CA: 139(9)132442u PATENT
 Methods and products for enhancing immune responses using
 imidazoquinoline compounds in combination with modified immunostimulatory
 oligonucleotide
 INVENTOR(AUTHOR): Krieg, Arthur M.; Schetter, Christian; Bratzler, Robert
 L.; Vollmer, Jorg; Jurk, Marion; Bauer, Stefan
 LOCATION: USA
 ASSIGNEE: University of Iowa Research Foundation
 PATENT: U.S. Pat. Appl. Publ.; US 20030139364 A1 DATE: 20030724
 APPLICATION: US 272502 (20021015) *US PV329208 (20011012)
 PAGES: 112 pp. CODEN: USXXCO LANGUAGE: English
 PATENT CLASSIFICATIONS:
 CLASS: 514044000; A61K-048/00A; A61K-038/00B; G01N-033/53B;
 A61K-031/56B; A61K-031/522B; A61K-031/4745B

2/3, K/2 (Item 2 from file: 399)

DI ALCO R) File 399: CA SEARCH(R)

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138203655 CA: 138(14)203655h PATENT
 Oligonucleotides containing stimulatory phosphorothioate motif and
 neutralizing motif for treating infections, allergies and cancers

10613736cpgseq1.txt
 INVENTOR(AUTHOR): Krieg, Arthur M.; Vollmer, Jorg; Uhman, Eugen
 LOCATION: USA
 ASSIGNEE: Coley Pharmaceutical Group, Inc.; Coley Pharmaceutical GmbH
 ; University of Iowa Research Foundation
 PATENT: PCT International; WO 200315711 A2 DATE: 20030227
 APPLICATIO: WO 2002US26468 (20020819) *US PV313273 (20010817) *US
 PV393952 (20020703)
 PAGES: 115 pp. CODEN: PIXXD2 LANGUAGE: English
 PATENT CLASSIFICATIONS:
 CLASS: A61K-000/A
 DESIGNATED COUNTRIES: AE; AG; AL; AM; AT; AU; AZ; BA; BB; BG; BR; BY; BZ;
 CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DZ; EC; EE; ES; FI; GB; GD; GE; GH;
 GM; HR; HU; ID; IL; IN; IS; JP; KE; KG; KP; KR; KZ; LC; LK; LR; LS; LT; LU;
 LV; MA; MD; MG; MK; MN; MW; MX; MY; NO; NZ; OM; PH; PL; PT; RO; RU; SD; SE;
 SG; SI; SK; SL; TJ; TM; TN; TR; TT; TZ; UA; UG; UZ; VN; YU; ZA; ZW; AM; AZ;
 BY; BG; BR; CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DZ; EC; EE; ES; FI; FR;
 GB; GR; IE; IT; LU; MC; NL; PT; SE; SK; TR; BF; BJ; CF; CG; CI; CM; GA; GN;
 GQ; GW; ML; MR; NE; SN; TD; TG

2/3, K/3 (Item 3 from file: 399)
 DIALOGR File 399: CA SEARCH(R)
 (c) 2010 American Chemical Society. All rts. reserv.

129023430 CA: 129(3) 23430m PATENT
 Immunostimulatory nucleic acid molecules
 INVENTOR(AUTHOR): Krieg, Arthur M.; Kline, Joel N.
 LOCATION: USA
 ASSIGNEE: University of Iowa Research Foundation; Krieg, Arthur M;
 Kline, Joel N.
 PATENT: PCT International; WO 9818810 A1 DATE: 19980507
 APPLICATIO: WO 97US19791 (19971030) *US 738652 (19961030)
 PAGES: 110 pp. CODEN: PIXXD2 LANGUAGE: English
 PATENT CLASSIFICATIONS:
 CLASS: C07H-021/00A; C07H-021/02B; C07H-021/04B; A61K-031/175B;
 A61K-031/335B; A61K-031/47B; A61K-031/70B
 DESIGNATED COUNTRIES: AL; AM; AT; AU; AZ; BA; BB; BG; BR; BY; CA; CH; CN;
 CU; CZ; DE; DK; EE; ES; FI; GB; GE; GH; HU; IL; IS; JP; KE; KG; KP; KR; KZ;
 LC; LK; LR; LS; LT; LU; LV; MD; MG; MK; MN; MW; MX; NO; NZ; PL; PT; RO; RU;
 SD; SE; SG; SI; SK; SL; TJ; TM; TR; TT; UA; UG; US; UZ; VN; YU; ZW; AM; AZ;
 BY; BG; BR; CA; CH; CN; CO; CR; CU; CZ; DE; DK; DM; DZ; EC; EE; ES; FI; FR;
 GB; GR; IE; IT; LU; MC; NL; PT; SE; BF; BJ; CF; CG; CI; CM; GA; GN; ML; MR; NE; SN; TD; TG

2/3, K/4 (Item 4 from file: 399)
 DIALOGR File 399: CA SEARCH(R)
 (c) 2010 American Chemical Society. All rts. reserv.

123217687 CA: 123(17) 217687x JOURNAL
 Cationic oligonucleotides with novel, cationic backbone substituents:
 amide nucleoside phosphonates
 AUTHOR(S): Fathi, Reza; Huang, Qing; Coppola, George; Delaney, William
 Teasdale, Rebecca; Krieg, Arthur M.; Cook, Alan F.
 LOCATION: PharmaGenics, Inc., Allendale, NJ, 07401, USA
 JOURNAL: Nucleic Acids Res. DATE: 1994. VOLUME: 22. NUMBER: 24. PAGES:
 5416-24. CODEN: NARHAD. ISSN: 0305-1048. LANGUAGE: English
 ? s backbone(w) modif? and (phos? or ?phos?)

Processing
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 Processing
 Processed 10 of 56 files ...

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Processing
Processing
Processed 20 of 56 files ...
Processing
>>>File 399 processing for PHOS? stopped at PHOSPHORHYDRAZINOTHI CATES
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Processing
Processed 30 of 56 files ...
Processing
Processing
Processed 40 of 56 files ...
Processing
Processing
Processed 50 of 56 files ...
Processing
Completed processing all files
      281168 BACKBONE
      7275132 MODIF?
      3266 BACKBONE(W MODIF?
      9761916 PHOS?
      4679 ?PHOS?
      S3 1229 BACKBONE(W MODIF? AND (PHOS? OR ?PHOS?)
? s s3 and (immuno? or inhibit? or ?immuno? or ?suppre? or ?stimul?)
Processing
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Processing
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Processed 10 of 56 files ...
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Processed 20 of 56 files ...
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Processed 30 of 56 files ...
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Processing
Processed 40 of 56 files ...
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Processing
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Processed 50 of 56 files ...
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Completed processing all files
      1229 S3
      15528524 IMMUNO?
      979 INIHI BIT?
      316 ?IMMUNO?
      119 ?SUPPRE?
      163510 ?STIMUL?
S4      175 S3 AND (IMMUNO? OR INIHI BIT? OR ?IMMUNO? OR ?SUPPRE? OR
      ?STIMUL?)

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? rd

>>>Duplicate detection is not supported for File 393.

>>>Duplicate detection is not supported for File 391.

>>>Records from unsupported files will be retained in the RD set.

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      S5      113 RD (unique items)
? s s5 and ?tcgtcggtttgtcggttttttcga?
Processed 10 of 56 files ...
Processed 20 of 56 files ...
Processed 30 of 56 files ...
Processed 40 of 56 files ...
Processed 50 of 56 files ...
Completed processing all files
      113 S5
      0 ?TGTGTTTTGTGTTTTTTTGA?
      S6      0 S5 AND ?TGTGTTTTGTGTTTTTTTGA?
?
PLEASE ENTER A COMMAND OR BE LOGGED OFF IN 5 MINUTES
? ds

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Set      Items      Description
S1      345      E3- E7
S2      4      S1 AND BACKBONE
S3      1229      BACKBONE(WMODIF? AND (PHOS? OR ?PHOS?))
S4      175      S3 AND (IMMUNO? OR INIHI BIT? OR ?IMMUNO? OR ?SUPPRE? OR ?S-
      TIMUL?)
S5      113      RD (unique items)
S6      0      S5 AND ?TGTGTTTTGTGTTTTTTTGA?
? t s5/3,k/1-15
>>>KW C option is not available in file(s): 399

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5/3,K/1 (Item 1 from file: 5)
DIALCO(R) File 5: Biosis Previews(R)
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0020822059 BIOSIS NO.: 200900162393

Immunostimulation and anti-DNA antibody production by backbone modified CpG-DNA

AUTHOR: Kim Dongbum, Rhee Jae Won, Kwon Sanghoon, Sohn Wern-Joo; Lee Younghee; Kim Dae-Won; Kim Doo-Si k; Kwon Hyung-Joo (Reprint)

AUTHOR ADDRESS: Hallym Univ, Coll Med, Ctr Med Sci Res, 39 Hallymdaehak G.I, Gangwon Do 200702, South Korea** South Korea

AUTHOR E-MAIL ADDRESS: hjoonwon@hallym.ac.kr

JOURNAL: Biochemical and Biophysical Research Communications 379 (2): p 362-367 FEB 6 2009 2009

ITEM IDENTIFIER: doi:10.1016/j.bbrc.2008.12.063

ISSN: 0006-291X
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

Immunostimulation and anti-DNA antibody production by backbone modified CpG-DNA

ABSTRACT: Oligodeoxynucleotides containing immunostimulatory CpG motifs (CpG-DNA) have gained attention as potentially useful therapeutics. However, the phosphorothioate-modified CpG-DNAs (PS-CDN) can induce backbone-related side effects. Here, we compared the immunostimulatory activity of natural phosphodiester CpG-DNA (PO-CDN) from *Mycobacterium bovis* and PS-CDN in mice. Both PO-CDN...

...numbers, or IgM production. These results may provide an explanation for the side effects in immunotherapeutic application of PS-CDN. They also suggest that PO-CDN may be more optimal than...

...REGISTRY NUMBERS: phosphorothioate

DESCRIPTORS:

CHEMICALS & BIOCHEMICALS: IgM {immunoglobulin M...

...phosphodiester; ...

...phosphorothioate-

METHODS & EQUIPMENT: immunostimulation-...

...laboratory techniques, immunologic techniques

5/3, K/2 (Item 2 from file: 5)
DIALOG(R) File 5: Biosis Previews(R)
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19332405 BIOSIS NO.: 200600677800
Synthesis and conformational studies of glycosylated beta-peptides
AUTHOR: Norgren A S (Reprint); Arvidsson P I
AUTHOR ADDRESS: Dept Biochem and Organ Chem, Uppsala, Sweden**Sweden
JOURNAL: Journal of Peptide Science 12 (Suppl. S): p101 2006 2006
CONFERENCE/MEETING: 29th European Peptide Symposium Gdansk, POLAND
September 03-08, 2006; 20060903
ISSN: 1075-2617
DOCUMENT TYPE: Meeting; Meeting Abstract
RECORD TYPE: Citation
LANGUAGE: English

DESCRIPTORS:

CHEMICALS & BIOCHEMICALS: ...phosphoryl residue
MISCELLANEOUS TERMS: ...backbone modification; ...

...immunodifferentiation;

CONCEPT CODES:

5/3, K/3 (Item 3 from file: 5)
DIALOG(R) File 5: Biosis Previews(R)
(c) 2009 The Thomson Corporation. All rights reserved.

17657292 BIOSIS NO.: 200400028049
NF-kappaB-dependent regulation of tumor necrosis factor-alpha gene expression by CpG oligodeoxynucleotides.
AUTHOR: Kwon Hyung-Joo; Lee Keun-Wook; Yu Sang Ho; Han Jung Ho; Kim Doo-Sik
Page 5

(Reprint)

AUTHOR ADDRESS: Institute of Life Science and Biotechnology, Yonsei University, Seoul, 120-749, South Korea**South Korea
 AUTHOR E-MAIL ADDRESS: dskim@yonsei.ac.kr
 JOURNAL: Biochemical and Biophysical Research Communications 311 (1): p 129-138 November 7, 2003 2003
 MEDLINE print
 ISSN: 0006-291X
 DOCUMENT TYPE: Article
 RECORD TYPE: Abstract
 LANGUAGE: English

ABSTRACT: Immunostimulatory activities of synthetic oligodeoxynucleotides containing CpG motifs (CpG-ODNs) have gained attention as potentially useful immunotherapeutics. However, CpG-ODNs induce harmful and lethal shock effects because they greatly enhance the sequence-dependent induction of tumor necrosis factor-alpha (TNF-alpha). We have shown that phosphorothioate-modified oligodeoxynucleotides (PS-ODNs) of the CpG-ODN 1826 stimulate TNF-alpha gene expression, TNF-alpha promoter activity, IkappaB degradation, and NF-kappaB activation at higher levels compared with its phosphodiester ODN (PO-ODN). In contrast to the effects of CpG-ODN 1826, PS-ODN of...

...the innate immune responses by modulating the potency of CpG-ODNs via sequence rearrangement and phosphorothioate backbone modification.

DESCRIPTORS:
 CHEMICALS & BIOCHEMICALS: ...immunologic-drug...
 ...phosphodiester oligodeoxynucleotide...
 ...immunologic-drug

5/3, K/4 (Item 4 from file: 5)
 DIACOPY File 5: Biosis Previews(R)
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17117859 BIOSIS NO.: 200300076578
 Phosphorothioate backbone modification changes the pattern of responses to CpG
 BOOK TITLE: Microbial DNA and host immunity
 AUTHOR: Stacey Kathryn J (Reprint); Sester David P; Naik Shalin; Roberts Tara L (Reprint); Sweet Matthew J (Reprint); Hume David A
 BOOK AUTHOR/EDITOR: Raz Eyal (Editor)
 AUTHOR ADDRESS: Institute for Molecular Bioscience, University of Queensland, Brisbane, QLD, Australia**Australia
 p63-77 2002
 MEDLINE print
 BOOK PUBLISHER: Humana Press Inc., 999 Riverview Drive, Suite 208, Totowa, NJ, 07512, USA
 ISBN: 1-58829-022-0 (cloth)
 DOCUMENT TYPE: Book Chapter
 RECORD TYPE: Citation
 LANGUAGE: English

Phosphorothioate backbone modification changes the pattern of responses to CpG
 DESCRIPTORS:
 CHEMICALS & BIOCHEMICALS: ...phosphorothioate backbone...

...immunostimulatory DNA

5/3, K/5 (Item 5 from file: 5)
 DIALCOG(R) File 5: Biosis Previews(R)
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16743375 BIOSIS NO.: 200200336886
 Phosphodiester CpG oligonucleotides as adjuvants: Polyguanosine runs
 enhance cellular uptake and improve immunostimulative activity of
 phosphodiester CpG oligonucleotides in vitro and in vivo
 AUTHOR: Dalpke Alexander H; Zimmermann Stefan; Albrecht Inka; Heeg Klaus
 (Reprint)
 AUTHOR ADDRESS: Institute of Medical Microbiology and Hygiene,
 Philipps-University Marburg, Pilgrimstein 2, 35037, Marburg, Germany**
 Germany
 JOURNAL: Immunology 106 (1): p102-112 May, 2002 2002
 MEDLINE print
 ISSN: 0019-2805
 DOCUMENT TYPE: Article
 RECORD TYPE: Abstract
 LANGUAGE: English

Phosphodiester CpG oligonucleotides as adjuvants: Polyguanosine runs
 enhance cellular uptake and improve immunostimulative activity of
 phosphodiester CpG oligonucleotides in vitro and in vivo

... ABSTRACT: g. antigen-presenting cells (APC). The rate of uptake is
 influenced by the DNA's backbone modification and critically
 determines activity of CpG-DNA. CpG-ODN with a phosphothioate
 backbone (PTO) are currently used for most in vivo and in vitro studies,
 since PTO...

...To circumvent these restrictions we investigated the effects of DNA
 sequence as well as DNA backbone modification on cellular
 uptake and resulting immunostimulation. We show here that uptake of
 phosphodiester (PO)-CpG-ODN can be strongly enhanced by poly
 guanosine runs added at the 3' end of the ODN. In addition these ODN
 showed an improved immunostimulatory activity in vivo and in vitro.
 This included protection of mice against lethal Th2-dependent...

DESCRIPTORS:
 CHEMICALS & BIOCHEMICALS: ...phosphodiester CpG oligonucleotides
 ...

...cellular uptake, immunostimulative activity...

...phosphothioate backbone {PTO}

5/3, K/6 (Item 6 from file: 5)
 DIALCOG(R) File 5: Biosis Previews(R)
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09634850 BIOSIS NO.: 198987082741
 CHARACTERIZATION OF A BROADLY EXPRESSED HUMAN LEUKOCYTE SURFACE ANTIGEN
 MEM 43 ANCHORED IN MEMBRANE THROUGH PHOSPHATIDYLINOSITOL
 AUTHOR: STEFANOVA I (Reprint); HILGERT I; KRISTOFANOVA H; BROWN R; LOW M G;
 HOREJSI V
 AUTHOR ADDRESS: INST MOLECULAR GENETICS, CZECH ACAD SCI, VEDENSKA 1083,
 14220 PRAHA 4, CZECH**CZECHOSLOVAKIA
 JOURNAL: Molecular Immunology 26 (2): p153-162 1989
 ISSN: 0161-5890

DOCUMENT TYPE: Article
 RECORD TYPE: Abstract
 LANGUAGE: ENGLISH

CHARACTERIZATION OF A BROADLY EXPRESSED HUMAN LEUKOCYTE SURFACE ANTIGEN
 MEM-43 ANCHORED IN MEMBRANE THROUGH PHOSPHATIDYLINOSITOL

...ABSTRACT: absent from U937, Nalm6, Daudi and Raji cell lines. The antigen isolated by immunoaffinity chromatography from several cell lines is an 18,000-25,000 mol. wt glycoprotein. An...

...isolated from erythrocytes binds to several lectins and has a 14,000 mol. wt polypeptide backbone, modified by an endoglycosidase F-sensitive carbohydrate moiety. The epitope recognized is reduction-sensitive. The sequence...

...antigen Ly-6C. The antigen is completely released from the cell surface after treatment with phosphatidylinositol-specific phospholipase C.

DESCRIPTORS: ERYTHROCYTE PERIPHERAL BLOOD LEUKOCYTE MONOCLONAL ANTIBODY
 MOLECULAR SEQUENCE DATA AMINO ACID SEQUENCE IMMUNOAFFINITY
 CHROMATOGRAPHY

5/3/K/7 (Item 1 from file: 24)
 DIALOG(R) File 24: CSA Life Sciences Abstracts
 (c) 2009 CSA. All rights reserved.

0003940158 IP ACCESSION NO: 11177441
 Is antisense an appropriate nomenclature or design for
 oligodeoxynucleotides aimed at the inhibition of HIV-1 replication?

Lavigne, Carole; Yelle, Jocelyn; Sauve, Gilles; Thierry, Alain R
 Département de Microbiologie et Immunologie, Faculté de Médecine, Université
 de Montréal, H3C 3J7 Montréal, Québec, Canada,
 [mailto:thierry1@mc.mcgill.ca]

AAPS Journal, v 4, n 2, p 34-44, June 2002
 PUBLICATION DATE: 2002

PUBLISHER: American Association of Pharmaceutical Scientists

DOCUMENT TYPE: Journal Article
 RECORD TYPE: Abstract
 LANGUAGE: English
 SUMMARY LANGUAGE: English
 ISSN: 1550-7416
 FILE SEGMENT: Virology & AIDS Abstracts
 ABSTRACT:

We have evaluated the specificity and the variation in activity against human immunodeficiency virus (HIV) infection of antisense oligodeoxynucleotides (ODNs) with regard to factors such as dose-response range, number and choice of experimental controls, backbone modifications of the ODNs, type of cell infection, length of assays, and delivery approach. The highest...

...assay with MOLT-3 cells acutely infected with HIV-1 (IIIB) and treated with free phosphorothioate-modified ODNs (PS-ODNs). The highest level of specificity was observed in our short-term...

DESCRIPTORS: Antisense oligonucleotides; Antiviral activity; Data processing; Infection; Nomenclature; Oligonucleotides; Replication;

5/3, K/8 (Item 2 from file: 24)
DIALOG File 24: CSA Life Sciences Abstracts
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0002240493 IP ACCESSION NO: 4872273
Site-Specific Administration of Antisense Oligonucleotides using
Biodegradable Polymer Microspheres Provides Sustained Delivery and Improved
Subcellular Biodistribution in the Neostriatum of the Rat Brain

Khan, A; Sommer, W; Fuxe, K; Akhtar, S
Pharmaceutical Sciences Research Institute, Aston University, Aston
Triangle, Birmingham B4 7ET, UK, [mailto:S.Akhtar@aston.ac.uk]

Journal of Drug Targeting, v 8, n 5, p 319-334, 2000
PUBLICATION DATE: 2000

DOCUMENT TYPE: Journal Article
RECORD TYPE: Abstract
LANGUAGE: English
SUMMARY LANGUAGE: English
ISSN: 1061-186X
FILE SEGMENT: Medical & Pharmaceutical Biotechnology Abstracts

ABSTRACT:
... site-specific delivery system for targeting CDNs to the neostriatum of
the rat brain. Model phosphorothioate backbone-modified
CDNs were entrapped within poly(D, L-lactide-co-glycolide) (PLGA)
microspheres using a double...

... and the fluorescence appeared to be diffuse covering both cytosolic and
nuclear regions. Dual-label immunohistochemical analyses suggested
that CDNs were mainly distributed to neuronal cells. These data indicate
that site...

5/3, K/9 (Item 3 from file: 24)
DIALOG File 24: CSA Life Sciences Abstracts
(c) 2009 CSA. All rts. reserv.

0002138198 IP ACCESSION NO: 4780087
Phosphorothioate Backbone Modification Modulates
Macrophage Activation by CpG DNA

Sester, DP; Naik, S; Beasley, SJ; Hume, DA; Stacey, KJ*
Institute for Molecular Bioscience, University of Queensland, Brisbane
4072, Australia, [mailto:K.Stacey@mb.uq.edu.au]

Journal of Immunology, v 165, n 8, p 4165-4173, October 15, 2000
PUBLICATION DATE: 2000

DOCUMENT TYPE: Journal Article
RECORD TYPE: Abstract
LANGUAGE: English
SUMMARY LANGUAGE: English
ISSN: 0022-1767
FILE SEGMENT: Immunology Abstracts; Nucleic Acids Abstracts

Phosphorothioate Backbone Modification Modulates
Macrophage Activation by CpG DNA
ABSTRACT:

10613736cpgseq1.txt

Macrophages respond to unmethylated CpG motifs present in nonmammalian DNA. Stabilized phosphorothioate-modified oligodeoxynucleotides (PS-ODN) containing CpG motifs form the basis of immunotherapeutic agents. In this study, we show that PS-ODN do not perfectly mimic native DNA...

...CpG-containing PS-ODN were active at 10- to 100-fold lower concentrations than corresponding phosphodiester ODN in maintenance of cell viability in the absence of CSF-1, in induction of...

...components may contribute to this, as PS-ODN were slower and less effective at inducing phosphorylation of the extracellular signal-related kinases 1 and 2. In addition, at high concentrations, non-CpG PS-ODN specifically inhibited responses to CpG DNA, whereas nonstimulatory phosphodiester ODN had no such effect. Although nonstimulatory PS-ODN caused some inhibition of ODN uptake...

...did not adequately explain the levels of inhibition of activity. The results demonstrate that the phosphorothioate backbone has both enhancing and inhibitory effects on macrophage responses to CpG DNA.
DESCRIP TORS: Macrophages; phosphorothioate; oligodeoxynucleotides
IDENTIFIERS: CpG motifs; immunology
...SUBJ CATG: Immunological aspects

5/3, K/10 (Item 1 from file: 34)
DIALOG(R) File 34: SciSearch(R) Cited Ref Sci
(c) 2009 The Thomson Corp. All rights reserved.

13195519 Genuine Article#: 857EB No. References: 41
Title: C-class CpG ODN: sequence requirements and characterization of immunostimulatory activities on mRNA level
Author: Jurk M (REPRINT) ; Schulte B; Kitzler A; Noll B; Uhlmann E; Vøder T; Schetter C; Krieg AM; Vollmer J
Author Email Address: m.jurk@colleypharma.com
Corporate Source: Colley Pharmaceut GMBH, Elisabeth Selbert Str. 9/D-40764 Langenfeld//Germany/ (REPRINT); Colley Pharmaceut GMBH, D-40764 Langenfeld//Germany/; Colley Pharmaceut Gp Inc, Wellesley//MA/
Journal: IMMUNOBIOLOGY, 2004, V209, N1-2, P141-154
ISSN: 0171-2985 Publication Date: 20040000
Publisher: URBAN & FISCHER VERLAG, BRANCH OFFICE JENA, P O BOX 100537, D-07705 JENA, GERMANY
Language: English Document Type: ARTICLE (ABSTRACT AVAILABLE)

Title: C-class CpG ODN: sequence requirements and characterization of immunostimulatory activities on mRNA level
...Abstract: sequence requirements of C-Class ODN regarding optimal IFN-alpha secretion. Sequence as well as backbone modifications like 2'-O-methyl modifications especially in the 5' part of the ODN influence IFN...
...Identifiers: PLASMACYTODENDRITIC CELLS; IFN-GAMMA PRODUCTION; HUMAN B-CELLS; BACTERIAL-DNA; PHOSPHOROTHIOATE OLIGODEOXYNUCLEOTIDES; IMMUNE STIMULATION; OLIGONUCLEOTIDE SEQUENCES; CXC CHEMOKINES; IN-VITRO; T-CELLS

5/3, K/11 (Item 2 from file: 34)
DIALOG(R) File 34: SciSearch(R) Cited Ref Sci
(c) 2009 The Thomson Corp. All rights reserved.

10916029 Genuine Article#: 584MJ No. References: 45
Title: Is antisense an appropriate nomenclature or design for oligodeoxynucleotides aimed at the inhibition of HIV-1 replication? -
Page 10

art. no. 9

Author: Lavigne C; Yelle J; Sauve G; Thierry AR (REPRINT)
 Corporate Source: Lab Def Antivirales & Antitumorales, UMR 5124, Medi nCell
 Project, Case Courrier 27, 1919, Route Mende/F-34293 Montpellier
 5//France/ (REPRINT); Lab Def Antivirales & Antitumorales, UMR 5124,
 Medi nCell Project, F-34293 Montpellier 5//France; Univ Quebec, Inst
 Armand Frappier, Laval/PQ H7N 4Z3/Canada; NCI, Tumor Cell Biol Lab,
 NIH, Bethesda//MD 20892
 Journal: AAPS PHARMSCI, 2002, V4, N2, P9-9
 ISSN: 1522-1059 Publication Date: 20020000
 Publisher: AMER ASSOC PHARMACEUTICAL SCIENTISTS, 1650 KING ST, STE 200,
 ALEXANDRIA, VA 22314-2747 USA
 Language: English Document Type: ARTI CLE (ABSTRACT AVAILABLE)

Abstract: We have evaluated the specificity and the variation in activity
 against human immunodeficiency virus (HIV) infection of antisense
 oligodeoxynucleotides (ODNs) with regard to factors such as
 dose-response range, number and choice of experimental controls,
 backbone modifications of the ODNs, type of cell infection,
 length of assays, and delivery approach. The highest...

... assay with MOLT-3 cells acutely infected with HIV-1 (IIIB) and treated
 with free phosphorothioate-modified ODNs (PS-ODNs). The highest
 level of specificity was observed in our short-term...
 ... Identifiers: HUMAN-IMMUNODEFICIENCY-VIRUS; SEQUENCE-SPECIFIC
 INHIBITION; CHRONICALLY-INFECTED-CELLS; PHOSPHOROTHIATE
 OLIGODEOXYNUCLEOTIDES; GENE-EXPRESSION; HTLV-III; TYPE-1;
 OLIGONUCLEOTIDES; PHARMACOKINETICS; RNA

5/3, K/12 (Item 3 from file: 34)
 DIALOG(R) File 34: Sci Search(R) Cited Ref Sci
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09609746 Genuine Article# 42703 No. References: 32
 Title: Lipid-based delivery of combinations of antisense
 oligodeoxynucleotides for the in vitro inhibition of HIV-1 replication
 Author: Lavigne C (REPRINT); Yelle J; Sauve G; Thierry AR
 Corporate Source: Medi nCell Project, 6 Rue des Monts du Vivarais/F-31240
 Lunion//France/ (REPRINT); Medi nCell Project, F-31240 Lunion//France;
 Univ Montreal, Fac Med, Dept Microbiol & Immunol, Montreal/PQ H3C
 3J7/Canada; Univ Quebec, Inst Armand Frappier, Laval/PQ H7N 4Z3/Canada;
 NCI, Tumor Cell Biol Lab, NIH, Bethesda//MD 20892
 Journal: AAPS PHARMSCI, 2001, V3, N1, P86-U97
 ISSN: 1522-1059 Publication Date: 20010000
 Publisher: AMER ASSOC PHARMACEUTICAL SCIENTISTS, 1650 KING ST, STE 200,
 ALEXANDRIA, VA 22314-2747 USA
 Language: English Document Type: ARTI CLE (ABSTRACT AVAILABLE)

... Abstract: a combination strategy in cell cultures including ODN
 concentrations, type of infection (acute vs chronic), backbone
 modification of the ODN, and the number of sequences. When
 delivered by the DLS carrier system...
 ... might block an early step of virus replication by combined inhibitory
 effects. Various combinations of phosphorothioate-modified (PS)
 and unmodified oligonucleotides delivered by the DLS system were
 compared for their antiviral...
 ... using HIV-T (IIIB strain)-infected MOLT-3 cells. The most effective
 combination had 3 phosphorothioate antisense ODNs: Srev, SDIS,
 and SPac (>99% inhibition at 100 pM. However, the additive effect...
 ... Identifiers: HUMAN-IMMUNODEFICIENCY-VIRUS; HTLV-III; TYPE-1 RNA;

10613736cpgseq1.txt
PHOSPHOROTHI OATE; OLIGONUCLEOTIDES; SEQUENCE; PHARMACOKINETICS;
COMPLEMENTARY; EXPRESSION; AIDS

5/3, K/13 (Item 4 from file: 34)
DI ALCOR File 34: Sci Search(R) Cited Ref Sci
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07244402 Genuine Article#: 1400K No. References: 42
Title: Coactivator OBF-1 makes selective contacts with both the
POU-specific domain and the POU homeodomain and acts as a molecular
clamp on DNA
Author: Sauter P; Matthias P (REPRINT)
Corporate Source: FRIEDRICH M ESCHER INST, MAULBEERSTR 66, POB 2543/CH-4058
BASEL//SWITZERLAND/ (REPRINT); FRIEDRICH M ESCHER INST, /CH-4058
BASEL//SWITZERLAND/
Journal: MOLECULAR AND CELLULAR BIOLOGY, 1998, V18, N12 (DEC), P7397-7409
ISSN: 0270-7306 Publication Date: 19981200
Publisher: AMER SOC MICROBIOLOGY, 1325 MASSACHUSETTS AVENUE, NW
WASHINGTON, DC 20005-4171
Language: English Document Type: ARTICLE (ABSTRACT AVAILABLE)

... Abstract: differently in the presence of OBF-1 compared to the POU
domain alone, and using phosphothioate backbone-
modified probes in electrophoretic mobility shift assays, we
identified several positions influencing ternary complex formation, We
...
... Identifiers: CELL-SPECIFIC COACTIVATOR; BINDING TRANSCRIPTION FACTORS;
CCA-B; FUNCTIONAL-CHARACTERIZATION; IMMUNOGLOBULIN PROMOTERS;
ACTIVATION DOMAINS; CRYSTAL-STRUCTURE; MURINE HOMOLOG; HOMEODOMAIN;
CCT-1

5/3, K/14 (Item 5 from file: 34)
DI ALCOR File 34: Sci Search(R) Cited Ref Sci
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07029568 Genuine Article#: 116JT No. References: 291
Title: Modified oligonucleotides: Synthesis and strategy for users
Author: Verna S (REPRINT); Eckstein F
Corporate Source: MAX PLANCK INST EXPT MED, HERMANN REINSTR 3/D-37075
GOTTINGEN/GERMANY/ (REPRINT)
Journal: ANNUAL REVIEW OF BIOCHEMISTRY, 1998, V67, P99-134
ISSN: 0066-4154 Publication Date: 19980000
Publisher: ANNUAL REVIEW INC, 4139 EL CAMINO WAY, PO BOX 10139, PALO ALTO,
CA 94303-0139
Language: English Document Type: REVIEW (ABSTRACT AVAILABLE)

... Abstract: and nucleic acid cross-linking studies.

The automation of oligonucleotide synthesis, the development of
versatile phosphoramidite reagents, and efficient scale-up have
expanded the application of modified oligonucleotides to diverse areas
...

... biological research. Numerous reports have covered oligonucleotides for
which modifications have been made of the phosphodiester
backbone, of the purine and pyrimidine heterocyclic bases, and of the
sugar moiety; these modifications...

... such chemically modified oligonucleotides. Because of space limitations,
we discuss only those oligonucleotides that contain phosphate and
phosphate analogs as internucleotidic linkages.

10613736cpgseq1.txt
 ... Descriptors: oligonucleotide analogs ; backbone
 modifications ; base modifications ; sugar modifications ;
 reporter groups
 ... Identifiers: LINKING; TRIPLE-HELIX FORMATION; STRAND DISPLACEMENT
 AMPLIFICATION; NUCLEOTIDE ANALOG 2-AMINOPURINE; TETRAHYMENA RIBOZYME
 REACTION; HUMAN-IMMUNODEFICIENCY-VIRUS

5/3, K/15 (Item 6 from file: 34)
 DIALOG(R) File 34: SciSearch(R) Cited Ref Sci
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05255305 Genuine Article#: VM029 No. References: 183
 Title: STRUCTURAL ASPECTS OF NUCLEIC-ACID ANALOGS AND ANTI SENSE
 OLIGONUCLEOTIDES
 Author: EGLIM
 Corporate Source: NORTHWESTERN UNIVERSITY, SCH MED, DEPT BIOL CHEM & MOL
 PHARMACOL, 303 E CHICAGO AVE/CHICAGO/IL/60611
 Journal: ANGEWANDTE CHEMIE-INTERNATIONAL EDITION IN ENGLISH, 1996, V35, N17
 (SEP 20), P1895-1910
 ISSN: 0570-0833
 Language: ENGLISH Document Type: REVIEW

... Identifiers: FORMATION; B-DNA DODECAMER; X-RAY CRYSTAL;
 MOLECULAR-STRUCTURE; GENE-EXPRESSION; CONFORMATIONAL FLEXIBILITY;
 INTERNUCLEOSIDE LINKAGES; PHOSPHOESTER LINKAGE; CARBOCYCLIC
 THYMIDINE; BACKBONE MODIFICATION
 ... Research Fronts: ANGSTROM RESOLUTION; REFINED CRYSTAL-STRUCTURE;
 KNOWLEDGE-BASED PROTEIN MODELING
 94-1702 001 (HAMMERHEAD RIBOZYME; HUMAN-IMMUNODEFICIENCY-VIRUS
 TYPE-1 RNASE IN-VITRO; INTRACELLULAR ANTI-REVERSE SINGLE-CHAIN ANTIBODY)
 94-4790 001...
 ? ds

Set	Items	Description
S1	345	E3-E7
S2	4	S1 AND BACKBONE
S3	1229	BACKBONE(W MODIFIED AND (PHOS? OR ?PHOS?))
S4	175	S3 AND (IMMUNO? OR INHIBIT? OR ?IMMUNO? OR ?SUPPRE? OR ?S- TIMUL?)
S5	113	RD (unique items)
S6	0	S5 AND ?TOGTGTTTTGTGTTTTTTTGA?